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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/690,180	10/20/2003	Ralf Dunkel	81569 (0703)	3930

22242 7590 05/04/2006

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EXAMINER

LEWIS, DAVID LEE

ART UNIT PAPER NUMBER

2629

DATE MAILED: 05/04/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/690,180

Applicant(s)

DUNKEL, RALF

Examiner

David L. Lewis

Art Unit

2629

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 20 October 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-13 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-13 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 20 October 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>3/04/2004; 3/8/2004</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Specification

1. The disclosure is objected to because of the following informalities: The disclosure fails to make reference to the items numbered in figures 1-3 in correspondence to the claimed subject matter. The specification should include a description of the figure item numbers when identifying like items found in the drawings.

Appropriate correction is required.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. **Claims 1-13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Walck et al. (2006/0066508) in view of Foreset et al. (2003/0213967).**

As in claim 1, Walck et al. teaches of a vehicle display device, which device comprises: an optically transparent laminated windshield having inner and outer juxtaposed plies, figure 1 item 18 and 24,

an interlayer disposed between said plies, said interlayer being optically transparent and adhering to said plies so as to join them in a laminated construction, **figure 1 item 32, paragraph 28 and 30**

a TOLED which is located so as to be in the field of vision of an operator of the vehicle and which is likewise disposed between said plies, **figure 1 item 11, paragraph 28 and 44,**

However Walck et al. is silent as to said transparent conductor means leading to said TOLED for activating said TOLED to generate light within said plies of the windshield to provide a head-up message or the like in the field of vision of such operator so the operator's eyes may always remain on the road ahead.

Foreset et al. teaches of said transparent conductor means leading to said TOLED for activating said TOLED to generate light a windshield to provide a head-up message or the like in the field of vision of such operator so the operator's eyes may always remain on the road ahead, figure 17 items 314 and 316, paragraph 105, or figures 12-16.

Foreset et al. teaches of said TOLED having transparent conductors for use in a windshield and Walck et al. teaches how a TOLED can be laminated in a windshield with all its associated parts, both provided in a heads up display applications. **Therefore it would have been obvious** to the skilled artisan at the time of the invention to combine the transparent OLED of Foreset et al. as laminated in a windshield as taught by Walck et al., because both Foreset et al. and Walck et al. teach of providing transparent OLED's within a windshield for the purpose of providing a heads up display, and each teaches of features that advance the objective of the others invention, specifically Walck et al. teaches how Foreset et al. can laminate an OLED in a windshield, as found in claim 1.

As in claim 2, Foreset et al. teaches of wherein said interlayer includes inner and outer polymeric layers with said TOLED being sandwiched there between, figure 14b items 50 and 188, or figure 17 item 302, paragraph 106. Wherein plastic may replace glass.

As in claim 3, Walck et al. teaches of wherein said TOLED carries a layer of pressure sensitive adhesive on one surface and is located between said interlayer and one said ply, figure 1 item 42, paragraph 35-38.

As in claim 4, Walck et al. teaches of wherein said plies are made of glass, figure 1 items 18, 24, paragraph 33.

As in claim 5, Foreset et al. teaches of wherein said TOLED is provided with transparent environmental barriers to moisture and/or oxygen to retain its integrity until such time as it is laminated between said plies, figure 12E item 97, paragraphs 81 and 84. Therein the device has an insulating layer and is hermetically sealed.

As in claim 6, Foreset et al. teaches of wherein the TOLED comprises a plurality of layers, figures 14, 16 and 17, including (a) an electron transporting layer, figure 16 item 158, (b) a polymeric light-emitting layer, figure 16 item 156, (c) a hole transporting layer, figure 16 item 154, (d) a pair of flanking electrode layers, figure 16 items 162, and (e) a pair of films of polycarbonate which in turn flank said electrodes, figure 14 items 50 and 188, figure 17 item 302, all of which layers and films are optically transparent, paragraph 100.

As in claims 7, Foreset et al. fails to teach of said polycarbonate films each have a thickness between about 0.1 and about 0.2 mm, however Foreset et al. teaches of said films being within 50 to 4000 angstroms, paragraph 39, which is of an approximate order of magnitude of the same range for polycarbonate films

and therefore would have been an obvious design choice in view of the recommended range as taught by Foreset et al., because such a thickness would accommodate lamination of the display within a windshield as taught by Walck et al., as found in claim 7.

As in claim 8, Foreset et al. teaches of wherein at least one of said polycarbonate films is coated with a layer of ceramic barrier material, figure 16 item 119.

As in claim 9, Foreset et al. teaches of wherein one of said polycarbonate films is coated with a layer of an acrylic polymer, paragraph 106, plastic.

As in claim 10, Foreset et al. teaches of wherein said conductor means includes a pair of conductors formed of transparent ITO, paragraph 105, 106, figure 16 item 162.

As in claim 12, Walck et al. teaches of a motor vehicle windshield which comprises: inner and outer plies of glass shaped to close a window opening in the front of an a motor vehicle, **figure 1 item 18 and 24,**

a polymeric interlayer of transparent material securing said plies to each other, **figure 1 item 32,**

a thin transparent display device located in juxtaposition with said interlayer in a generally central location between an upper edge and a lower edge of said windshield, **figure 1 item 11,**

However Walck et al. is silent as to wherein the display device contains a plurality of pixels that emit light when activated, transparent conductor means extending from said transparent display device to an edge of the windshield, and

means for connecting said conductor means to an electronic unit for sending signals to said display device to emit light and thereby create a head-up display at a location generally centrally of the motor vehicle operator's field of vision through the windshield toward the road ahead.

Foreset et al. teaches of the display device contains a plurality of pixels that emit light when activated, figure 14 and 15 (item 196), paragraph 94, and means for connecting said conductor means to an electronic unit for sending signals to said display device to emit light and thereby create a head-up display at a location generally centrally of the motor vehicle operator's field of vision through the windshield toward the road ahead, paragraph 105,106, figure 17 items 314 and 316, figure 15 items 197 and 198. Wherein the display 194 includes signal and drive lines as shown in figure 15 for the purpose causing said pixels to emit light. While Foreset fails to explicitly teach the transparent conductor means extending from said transparent display device to an edge of the windshield, this feature is an obvious design choice in view of a windshield display wherein the matrix display is provided in a heads up display application wherein the transparent display screen is centered on a windshield. In order for the display to be substantially fully transparent, paragraph 10, the signal and drive lines must also be transparent.

Foreset et al. teaches of said matrix pixeled TOLED having transparent conductors for use in a windshield and Walck et al. teaches how a TOLED can be laminated in a windshield with all its associated parts, both provided in a heads up display applications. **Therefore it would have been obvious** to the skilled artisan at the time of the invention to combine the transparent OLED of Foreset et al. as laminated in a windshield as taught by Walck et al., because both Foreset et al. and Walck et al. teach of providing transparent OLED's within a windshield for the purpose of providing a heads up display, and each teaches of features that advance the objective of the others invention, specifically Walck

et al. teaches how Foreset et al. can laminate an OLED in a windshield, as found in claim 12.

As in claims 11 and 13, Walck et al. teaches of a method for presenting a head-up display to the operator of a motor vehicle in a manner so the operator's eyes never need to leave the road ahead, paragraph 28

which method comprises: providing a thin transparent display device at a location between inner and outer plies of glass shaped to constitute a motor vehicle windshield at a generally central location between an upper edge and a lower edge of said windshield, **figure 1 items 18,24 and 11**

However Walck et a. is silent as to the display device contains a plurality of pixels that emit light when activated, connecting the display device via transparent conductor means extending from said transparent display device to an edge of the windshield, connecting said conductor means to an electronic unit, and sending signals from said electronic to said display device to cause said display device to emit light and thereby create a head-up display at a location generally centrally of the motor vehicle operator's field of vision through the windshield toward the road ahead.

Foreset et al. teaches of the display device contains a plurality of pixels that emit light when activated, figure 14 and 15 (item 196), paragraph 94, connecting the display device via transparent conductor means, paragraph 105,106, figure 17 items 314 and 316, connecting said conductor means to an electronic unit, figure 15 items 197-199, and sending signals from said electronic to said display device to cause said display device to emit light and thereby create a head-up display at a location generally centrally of the motor vehicle operator's field of vision through the windshield toward the road ahead, figure 15 items 197 and 198, paragraph 94. Wherein extending from said transparent display device to

an edge of the windshield (said elongated feature) would be an obvious design choice given the placement of the display in windshield in a heads up display application wherein the display is fully transparent when disengaged and has signal and drive lines for the purpose of effectuating the display from a control circuit. If the signal and drive lines where not transparent extending to the edge of the windshield, they could obstruct the drivers field of vision and pose a driving hazard. In order for the display to be substantially fully transparent as taught by Foreset, paragraph 10, the signal and drive lines must also be transparent. Therefore it would have been obvious to provide for said feature to prevent the obstruction to the drivers view of the road.

Foreset et al. teaches of said matrix pixeled TOLED having transparent conductors for use in a windshield and Walck et al. teaches how a TOLED can be laminated in a windshield with all its associated parts, both provided in a heads up display applications. **Therefore it would have been obvious** to the skilled artisan at the time of the invention to combine the transparent OLED of Foreset et al. as laminated in a windshield as taught by Walck et al., because both Foreset et al. and Walck et al. teach of providing transparent OLED's within a windshield for the purpose of providing a heads up display, and each teaches of features that advance the objective of the others invention, specifically Walck et al. teaches how Foreset et al. can laminate an OLED in a windshield, as found in claims 11 and 13.

Conclusion

3. Any inquiry concerning this communication or earlier communications from the examiner should be directed to **David L. Lewis** whose telephone number is **(571) 272-7673**. The examiner can normally be reached on MT and THF from 8 to 5. If attempts to reach the examiner by telephone are unsuccessful, the

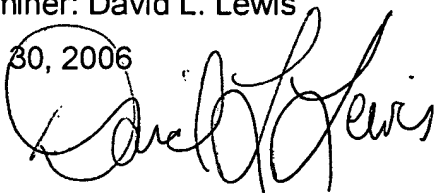
Art Unit: 2629

examiner's supervisor, Bipin Shalwala, can be reached on **(571) 272-7681**. Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Group receptionist whose telephone number is (571)-273-8300.

4. Please note that all future correspondences directed to David L. Lewis must be sent to Art Unit 2629.
5. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Examiner: David L. Lewis

April 30, 2006

A handwritten signature in black ink, appearing to read "David L. Lewis", is written over the printed name and date.